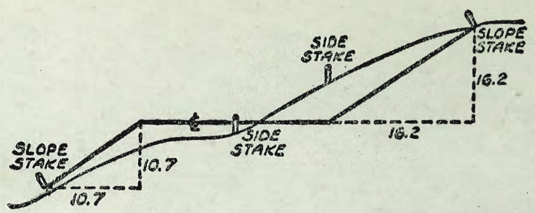
TRANSIT BOOK



DISTANCES FROM SIDE STAKES FOR CROSS-SECTIONING

SLOPE 1 TO 1. ROADWAY OF ANY WIDTH

	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	
0	0.00	0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	0
1	1.00	1.10	1.20	1.30	1.40	1.50	1.60	1.70	1.80	1.90	1
2	2.00	2.10	2.20	2.30	2.40	2.50	2.60	2.70	2.80	2.90	2
3	3.00	3.10	3.20	3.30	3.40	3.50	3.60	3.70	3.80	3.90	3
4	4.00	4.10	4.20	4.30	4.40	4.50	4.60	4.70	4.80	4.90	4
5	5.00	5.10	5.20	5.30	5.40	5.50	5.60	5.70	5.80	5.90	5
6	6.00	6.10	6.20	6.30	6.40	6.50	6.60	6.70	6.80	6.90	6
7	7.00	7.10	7.20	7.30	7.40	7.50	7.60	7.70	7.80	7.90	7
8	8.00	8.10	8.20	8.30	8.40	8.50	8.60	8.70	8.80	8.90	8
9	9.00	9.10	9.20	9.30	9.40	9.50	9.60	9.70	9.80	9.90	9
10	10.00	10.10	10.20	10.30	10.40	10.50	10.60	10.70	10.80	10.90	10
11	11.00	11.10	11.20	11.30	11.40	11.50	11.60	11.70	11.80	11.90	11
12	12.00	12.10	12.20	12.30	12.40	12.50	12.60	12.70	12.80	12.90	12
13	13.00	13.10	13.20	13.30	13.40	13.50	13.60	13.70	13.80	13.90	13
14	14.00	14.10	14.20	14.30	14.40	14.50	14.60	14.70	14.80	14.90	14
15	15.00	15.10	15.20	15.30	15.40	15.50	15.60	15.70	15.80	15.90	15
16	16.00	16.10	16.20	16.30	16.40	16.50	16.60	16.70	16.80	16.90	16
17	17.00	17.10	17.20	17.30	17.40	17.50	17.60	17.70	17.80	17.90	17
18	18.00	18.10	18.20	18.30	18.40	18.50	18.60	18.70	18.80	18.90	18
19	19.00	19.10	19.20	19.30	19.40	19.50	19.60	19.70	19.80	19.90	19
20	20.00	20.10	20.20	20.30	20.40	20.50	20.60	20.70	20.80	20.90	20
21	21.00	21.10	21.20	21.30	21.40	21.50	21.60	21.70	21.80	21.90	21
22	22.00	22.10	22.20	22.30	22.40	22.50	22.60	22.70	22.80	22.90	22
23	23.00	23.10	23.20	23.30	23.40	23.50	23.60	23.70	23.80	23.90	23
24	24.00	24.10	24.20	24.30	24.40	24.50	24.60	24.70	24.80	24.90	24
25	25.00	25.10	25.20	25.30	25.40	25.50	25.60	25.70	25.80	25.90	25
26	26.00	26.10	26.20	26.30	26.40	26.50	26.60	26.70	26.80	26.90	26
27	27.00	27.10	27.20	27.30	27.40	27.50	27.60	27.70	27.80	27.90	27
28	28.00	28.10	28.20	28.30	28.40	28.50	28.60	28.70	28.80	28.90	28
29	29.00	29.10	29.20	29.30	29.40	29.50	29.60	29.70	29.80	29.90	29
30	30.00	30.10	30.20	30.30	30.40	30.50	30.60	30.70	30.80	30.90	30
31	31.00	31.10	31.20	31.30	31.40	31.50	31.60	31.70	31.80	31.90	31
32	32.00	32.10	32.20	32.30	32.40	32.50	32.60	32.70	32.80	32.90	32
33	33.00	33.10	33.20	33.30	33.40	33.50	33.60	33.70	33.80	33.90	33
34	34.00	34.10	34.20	34.30	34.40	34.50	34.60	34.70	34.80	34.90	34
35	35.00	35.10	35.20	35.30	35.40	35.50	35.60	35.70	35.80	35.90	35
36	36.00	36.10	36.20	36.30	36.40	36.50	36.60	36.70	36.80	36.90	36
37	37.00	37.10	37.20	37.30	37.40	37.50	37.60	37.70	37.80	37.90	37
38	38.00	38.10	38.20	38.30	38.40	38.50	38.60	38.70	38.80	38.90	38
39	39.00	39.10	39.20	39.30	39.40	39.50	39.60	39.70	39.80	39.90	39
40	40.00	40.10	40.20	40.30	40.40	40.50	40.60	40.70	40.80	40.90	40
41	41.00	41.10	41.20	41.30	41.40	41.50	41.60	41.70	41.80	41.90	41
42	42.00	42.10	42.20	42.30	42.40	42.50	42.60	42.70	42.80	42.90	42
43	43.00	43.10	43.20	43.30	43.40	43.50	43.60	43.70	43.80	43.90	43
44	44.00	44.10	44.20	44.30	44.40	44.50	44.60	44.70	44.80	44.90	44
45	45.00	45.10	45.20	45.30	45.40	45.50	45.60	45.70	45.80	45.90	45
46	46.00	46.10	46.20	46.30	46.40	46.50	46.60	46.70	46.80	46.90	46
47	47.00	47.10	47.20	47.30	47.40	47.50	47.60	47.70	47.80	47.90	47
48	48.00	48.10	48.20	48.30	48.40	48.50	48.60	48.70	48.80	48.90	48
49	49.00	49.10	49.20	49.30	49.40	49.50	49.60	49.70	49.80	49.90	49
50	50.00	50.10	50.20	50.30	50.40	50.50	50.60	50.70	50.80	50.90	50

Distance of slope stake from side or shoulder stake for any width roadway, slope 1 to 1. If ground is nearly level, the cut or fill at side stake is located by the double entry method in left column and top row. The number in body of table in same row and column gives distance from side stake to slope stake. If ground is not level estimate the difference in elevation between the side stake and slope stake, lower target by this amount if cut, elevate if fill. Add this amount to cut or fill and find distance in table. Set up rod at this point, and line of sight should cut target. If it does not make the slight adjustment necessary.

G-371

Wabash

IMPROVED TABLES
AND
INFORMATION

TABLE XIII—CORRECTIONS FOR TANGENTS AND EXTERNALS

These corrections are to be added to the approximate values, found by dividing the tangent, or external, for a 1° curve (Table VIII) by the degree of curve, in order to obtain the true tangents, or externals. Intermediate values may be obtained by interpolation.

FOR TANGENTS ADD

Central Angle	Degree of Curve													
	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°
10°	03	.06	09	13	16	19	.22	.25	.28	.31	.34	38	42	.46
15°	04	10	14	19	24	.29	.34	.39	45	.51	.53	58	.63	.68
20°	06	.13	19	.26	.32	.39	.45	.51	.58	.65	.72	79	.84	.90
25°	.08	16	24	.33	40	49	.58	67	.75	.83	90	.99	1.06	1.14
30°	10	19	.29	39	49	.59	.69	79	.89	.99	1.09	1.20	1.29	1.39
35°	11	22	.34	47	.58	.69	.70	.81	.92	1.04	1.29	1.42	1.54	1.66
40°	13	.26	.40	.53	.67	.80	.93	1.06	1.20	1.34	1.49	1.64	1.79	1.94
45°	15	.30	44	60	76	91	1.06	1.21	1.37	1.52	1.70	1.87	2.04	2.21
50°	17	.34	.51	.68	.85	1.02	1.19	1.36	1.54	1.72	1.91	2.10	2.29	2.48
55°	19	38	.57	76	.95	1.14	1.32	1.52	1.72	1.92	2.14	2.35	2.56	2.77
60°	.21	42	.63	.84	1.05	1.27	1.49	1.71	1.94	2.17	2.38	2.60	2.83	3.07
65°	23	46	.69	.93	1.16	1 40	1.64	1.88	2.13	2.38	2.63	2.88	3.13	3.39
70°	25	.51	76	1.02	1.28	1.54	1.80	2.06	2.33	2.60	2.88	3.16	3.44	3.72
75°	.27	.56	.83	1.12	1.40	1.69	1.98	2.27	2.57	2.87	3.16	3.47	3.78	4.09
80°	30	.61	91	1.22	1.53	1.84	2.15	2.46	2 78	3.10	3.44	3.78	4.12	4.46
85°	33	66	1.00	1.33	1.68	2.02	2.36	2 70	3.05	3.40	3.77	4.14	4.55	4 89
90°	36	.72	1.09	1.45	1.83	2.20	2.57	2.94	3.32	3.70	4.10	4.50	4.91	5.32
95°	39	79	1.19	1.55	2.00	2.40	2.80	3.20	3.61	4.02	4.40	4.98	5.38	5.83
100°	43	.86	1.30	1.74	2.18	2.62	3.06	3.50	3.95	4.40	4.88	5.37	5.85	6.34
110°	51	1.03	1.56	2.08	2.61	3.14	3.67	4.21	4 76	5.31	5 86	6.43	7 01	7 60
120°	62	1.25	1 93	2.52	3.16	3.81	4 45	5.11	5.77	6 44	7 12	7.80	8.50	9 22

FOR EXTERNALS ADD

Central Angle	Degree of Curve													
	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°
10°	.001	.003	.004	.006	.007	.008	.009	.011	.012	.014	.015	.017	.018	.020
15°	.003	.007	.010	.014	.018	.023	.027	.029	.032	.035	.039	.043	.047	.051
20°	.006	.011	.017	.022	.028	.034	.038	.045	.051	.057	.063	.070	.076	.083
25°	.009	.018	.027	036	.046	.056	.065	.074	.083	.093	.106	120	127	135
30°	.013	.025	.038	.051	.065	.078	.090	.103	.116	.129	.149	.170	.179	.188
35°	.018	.035	.054	.072	.086	.109	.131	.153	.175	.197	.213	.230	.247	.264
40°	.023	.046	.070	.093	.117	.141	.172	.203	.234	.265	.277	.290	.315	.341
45°	.030	.060	.093	.119	.153	.184	.216	.254	.289	.325	.351	.378	.411	.445
50°	.037	.075	.116	.151	.189	.227	.266	.305	.345	.384	.425	.467	.508	.550
55°	.046	.093	.142	.188	.236	.283	.332	.381	.420	.479	.530	.582	.641	.700
60°	.056	.112	.168	.225	.283	.340	.398	.457	.516	.575	.636	.697	.774	.851
65°	.067	.135	.204	.273	.343	.412	.483	.554	.625	.697	.711	.845	.922	1.01
70°	.080	.159	.240	.321	.403	.485	.568	.652	.735	.819	.906	.994	1.08	1.17
75°	.095	.182	.286	.383	.480	.578	.678	.777	.877	.977	1.07	1.18	1.29	1.39
80°	.110	.220	.332	.445	.558	.671	.787	.903	1.02	1.13	1.25	1.38	1.50	1.62
85°	.128	.259	.391	.524	.657	.790	.926	1.06	1.20	1.34	1.47	1.62	1.76	1.91
90°	.149	.299	.450	.603	.756	.910	1.07	1.22	1.38	1.54	1.70	1.87	2.03	2.20
95°	.174	.350	.522	.706	.985	1.06	1.25	1.43	1.62	1.80	1.99	2.18	2.38	2.58
100°	.200	.401	.604	.809	1.01	1.22	1.43	1.64	1.85	2.06	2.28	2.50	2.73	2.96
110°	.268	.536	.806	1.08	1.35	1.63	1.91	2.20	2.48	2.76	3.05	3.35	3.66	3.96
120°	.360	.721	1.08	1.45	1.82	2.19	2.57	2.95	3.33	3.72	4.11	4.50	4.91	5.32

INdex

INdex

Slope Stake Borrow Area "A" Line Wabash Blvd.

Sta "A" Line Wabash Blvd Rt Lane		elv Botm	elv. top	elv. difference Top to Btm Cut.	distance Btwn top to Botm Cut.	elv. ie Brow ditch	elv of 10° Ref Stake	Difference in elv. Btwn top of slope stake & 10° Ref.	Cut to ie of Brow ditch & Dist. staked BK or Ely of ie	Slope Ratio
190+00		204^{2}	279^{2}	C 75^{0}	@ 75^{4}	276^{1}	280^{7}	$+1^{5}$	C4^{6} ~~C5^{7}~~ @5^{0}	1 to 1
189+50		202^{7}	277^{0}	C 74^{3}	@ 74^{0}	275^{0}	278^{5}	$+1^{5}$	C 3^{5} @5^{0}	1 to 1
189+00		201^{9}	270^{6}	C 68^{7}	@ 70^{0}	268^{6}	273^{1}	$+2^{5}$	C 4^{5} @ 5^{0} begin ditch	1^{02} to 1
188+70 Begin resetting 5° cyclone ROW fence										
188+50 Begin Borrow Area										
188+00										
187+50										

Note: <u>used</u> #6283 Wabash Blvd Sections for 30th St fill Roll 187+50 to 196+50 "A"
this has Spokane St grade plotted on it from green profile.

Sta "A" Line Wabash Blvd Rt Lane		elv Botm	elv top	elv difference top to Btm	Distance Btwn top & Botm	elv. ie Brow ditch	elv. of 10° Ref. stake	Difference in Elv. Btwn top slope stake & 10° Ref stake	Cut to ie of Brow ditch & distance BK. to ie	Slope ratio
193+00		210^{8}	289^{3}	C-78^{5}	@ 63^{5}	287^{3}	290^{2}	+0^{9}	C 2^{9} @ 5^{0}	$\frac{81}{100}$ to 1
192+50		209^{5}	287^{0}	C-77^{5}	@ 62^{5}	285^{0}	287^{8}	+0^{8}	C 2^{8} @ 5^{0}	$\frac{81}{100}$ to 1
192+00		208^{5}	283^{0}	C-74^{5}	@ 59^{5}	281^{0}	284^{3}	+1^{3}	C-3^{3} @ 5^{0}	$\frac{80}{100}$ to 1
191+50		207^{4}	279^{8}	C 72^{4}	@ 62^{5}	278^{7}	282^{0}	+2^{2}	C 3^{3} @ 5^{0}	$\frac{86}{100}$ to 1
191+00		206^{0}	279^{5}	C 73^{5}	@ 67^{0}	277^{2}	281^{3}	+1^{8}	C 4^{1} @ 5^{5}	$\frac{91}{100}$ to 1
190+50		205^{2}	280^{7}	C 75^{5}	@ 76^{0}	276^{6}	281^{9}	+1^{2}	C-5^{3} @ 5^{0}	1 to 1

		elv Botm	elv. top	elv. difference top to Btm	Distance Btwn top to Botm.	elv. ie Brow ditch	elv. of 10° Ref. Stake	Difference in elv. Btwn top slope Stake & 10° Ref Stake	Cut to ie Brow ditch & BK	Slope Ratio
196+00	End Borrow Area									
195+90	End (meet) 5° cyclone R.O.W. fence									
195+50		216^{3}	291^{3}	C-75^{0}	@ 75^{0}		292^{4}	+1^{1}		1 to 1
195+00		214^{8}	293^{3}	C-78^{5}	@ 79^{0}	291^{3}	293^{7}	+0^{4}	C 2^{4} @ 5^{0} end ditch	1 to 1
194+47.63		213^{8}	292^{4}	C-78^{6}	@ 78^{5}	290^{2}	294^{0}	+1^{6}	C 3^{8} @ 5^{0}	1 to 1
194+00		212^{8}	291^{6}	C 78^{8}	@ 67^{0}	289^{7}	292^{8}	+1^{2}	C 3^{1} @ 5^{0}	$\frac{85}{100}$ to 1
193+50		212^{2}	291^{0}	C-78^{8}	@ 65^{5}	288^{9}	291^{9}	+0^{9}	C 3^{0} @ 5^{0}	$\frac{83}{100}$ to 1

4

stakes Drainage Culvert accross
South Lane Nile St.
(Lt)

all elevations shown are Finish I.E.

						I.E. Elv.	
2+00	Nly end wing walls	staked 10° E alov 10° W of Ends		10° Wly 172^{57} $C\text{-}9^{02}$	10° Ely 166^{81} $C3^{26}$	163^{55}	Changed used Dal
2+08	Nly Headwall Culverts	10° Wly inside edge box 171^{59} $C8^{09}$	10° Ely insied edge box 166^{04} $C2^{54}$			163^{50}	
$2+35^{.3}$		171^{17} $C\text{-}7^{96}$				163^{21}	
$2+62^{6}$		169^{44} $C6^{52}$				162^{92}	
2+90	Sly Headwall Culverts	(19° Wly inside Box) 164^{22} $C\text{-}1^{59}$ 10° Wly inside edge box 163^{63} $C1^{00}$	10° Ely inside edge box 166^{57} $C3^{94}$			162^{63}	
2+98	Sly end Ely wing wall	stake 10° Ely of E end wing wall					

Nile St Alignment Rt. Lane

92+00

91+75

91+50

91+25

$91+06^{52}$ Nile St Rt Lane
=s 33° Rt
$168+31^{66}$ Wabash

$94+07^{94}$

94+00

$93+74^{38}$

93+50

93+25

93+00

92+75

92+50

92+25

$95+86^{92}$ P.R.C.		0° ↑00' 16° 58.952' ↓	+
95+75		15° 50.655'	✓
95+50		13° 27.415'	+
95+25	Δ= 33° 57' 53" Base R= 300' T= 91^{62} L= 177 84 d_1 = 5.7296'	11° 04.175'	✓
95+00		8° 40.935'	+
94+75		6° 17.695'	✓
94+50		3° 54.455'	+
$91+43^{65}$		3° 18.072'	
94+25		1° 31.215'	✓
$94+09^{08}$ BC		0° 00'	

97+75	✓	Δ 7° 37' 38"	½Δ 3° 48' 49"	✓
set 125' Rad Pt. ↗ $97+58^{36}$ P.C.C.		0° ↑00' 19° 38.739' ↓		+
97+50		18° 41.260'		+
97+25	Δ= 39° 17' 32" Base R= 250 T= 89^{25} L= 171^{44} d_1= 6.8755	15° 49.372		✓
97+00		12° 57.484'		+
96+75		10° 05.596'		✓
96+50		7° 13.708'		+
96+25		4° 21.820		✓
96+00		1° 29.932		+

99+55' BC, Pipe 75° Rad			
99+50			
		Δ	½Δ
99+46^{00} EC, 266 R		✓ 86°00'30"	43°00'15" ✓
99+25'		✓ 76°22'56"	38°11'28" ✓
99+24^{92}	{(BC, 266' Rad) (Nly pav edge)	– 76°20'56"	38°10'28"
	Δ = 86°00'30"		
99+00	Base R = 125' T = 116^{58} L = 187^{64}	✓ 64°55'23"	32°27'41" ✓
98+90	d_1 = 13.750987'	60°20'21	30°10'09"
98+75'		✓ 53°27'50"	26°43'54" ✓
98+50		✓ 42°00'17"	21°00'08" ✓
98+30		32°50'15"	16°25'07"
98+25'		✓ 30°32'44"	15°16'22" ✓
98+00		✓ 19°05'11"	9°32'35" ✓

N.G. due to SMH 101+13^{5} ℄ box culvert	(∠ 91°15'16" NEly) ℄ channel	0°49.97464
101+00		0°41.38028
100+75'		0°25.46479'
100+50		0°09.54929'
100+35' BC,		0°00'
100+25'		
100+00 = S 175'+79^{18} Wabash		
99+75'		
99+69^{66} EC, 266 Rad (Nly pav.)		

103+25			3° 04.61969'
103+00		✓	2° 48.70420
102+75			2° 32.78871
102+50	Δ = 15° 55' 46"	✓	2° 16.87322
102+25			2° 00.95773
102+00		✓	1° 45.04224
101+80			1° 32.30985
101+75			1° 29.12675'
101+50		✓	1° 13.21126'
101+25			0° 57.29577

Δ = 15° 55' 46"
Base R = 2700
L = $750^{\underline{66}}$
T = $377^{\underline{77}}$
d_1 = .6366197
Ex = $26^{\underline{30}}$
d 50' = 31.881'
d 25' = 15.940'

105+50	4	5° 27.85910'
105+25		5° 11.94361'
105+00	4	4° 56.02812'
104+75		4° 40.11263'
104+50	✓	4° 24.19714
104+25		4° 08.28165'
104+10$^{\underline{33}}$ Mid Pt	✓	3° 58.94244'
104+00	✓	3° 52.36616'
103+75		3° 36.45067
103+50	✓	3° 20.53518

107+50		×	7° 35.18302'
107+25			7° 19.26753'
107+00		×	7° 03.35204'
106+82 ℄ inlet	1°06' dft [illegible]		6° 51.89289'
106+75			6° 47.43653'
106+50		×	6° 31.52106'
106+25			6° 15.60557'
106+00		×	5° 59.69008'
105+75			5° 43.77459'
$105+62^{5}$			5° 35.81684'

109+50		+	3° 59.2119'	P.O.C.
109+25	Δ = 73°57'59"	✓	3° 02.4459'	
109+00	Base R = 757 $L = 977^{25}$ $T = 570^{09}$ $d_1 = 2.2706386$ $d_{25'} = 56.7660$ $d_{50'} = 1°53.5319$	+	2° 05.6799'	
108+75		✓	1° 18'9139	
108+50 5.35		+	0° 12.1479	
$108+44^{65}$ B.C.			0°00'	
108+25				
108+00				
$107+85^{66}$ E.C.	7°57'53"	✓	7° 57.88488'	
107+75			678637 7° 51.09851'	

112+00		✓	13° 26.8719
111+75			12° 30.1059
111+50		4	11° 33.3399' P.O.C.
	111+30	-	10° 48
111+25			10° 36.5739'
	10+20	—	10° 25
111+00		4	9° 39.8079'
110+75			8° 43.0419
110+50		4	7° 46.2759'
110+25		✓	6° 49.5099'
110+00		4	5° 52.7439'
109+75		✓	4° 55.9779'

114+50	✓ 22° 54.5319'
114+25	21° 57.7659'
114+00	✓ 21° 00.9999'
113+75	20° 04.2339'
113+50	✓ 19° 07.4679'
113+25	18° 10.7019'
113+00	✓ 17° 13.9359'
112+75	16° 17.1699'
112+50	✓ 15° 20.4039'
112+25	14° 23.6379'

117+00		32° 22.1919'
116+75		31° 25.4259'
116+50	P.O.C.	30° 28.6599'
116+25		29° 31.8939
116+00		28° 35.1279'
115+75		27° 38.3619'
115+50		26° 41.5959'
115+25		25° 44.8299
115+00		24° 48.0639'
114+75	✓	23° 51.2979'

18+61^{77} being the Nly line of Quince St.

From here on Nly Sta equate to old "P" Line

118+24^{10} meet existing con paving.

	36° 59' ✓
118+21^{90} E.C.	36°58.9829' ✓
118+16^{63} 1°Cb Rad Pt Eb	36° 47.0160
118+13^{75} P.C.C. 22° Rt Cb	36° 40.4472'
118+00	36° 09.2559'
117+75	35° 12.4899'
117+50	34° 15.7239'
117+25	33° 18.9579'

South or Left Lane Nile St Alignment

96+50 + 0°19.6238'

6^{85}

$96+43^{15}$ B.C. Nile St Lt Lane 0°00'

=s 31° Lt

$169+80^{65}$ Wabash Blvd.

98+75' 11° 04.2011'

98+50 + 9° 52.5814'

98+25' + 8° 40.9617'

98+00 + 7° 29.3420'

$\Delta = 56°27'04''$

base $R = 600$

$T = 322^{06}$

$L = 591^{15}$

$d_1 = 2.864789$

$d_{25'} = 1°11.6197'$

97+75' ✓ 6° 17.7223'

97+50 + 5° 06.1026'

97+25 ✓ 3° 54.4829'

97+00 + 2° 42.8632'

96+75 ✓ 1° 31.2435'

101+00	#	21°	48.7784
100+75	✓	20°	37.1587
100+50	4	19°	25.5390
100+34 ℄ culvert sta 2+32		18°	39.7024
100+25	✓	18°	13.9193'
+12.50 ℄ inlet on Lt.		17°	38.1094'
100+00	+	17°	02.2996'
99+75		15°	50.6799'
99+50	4	14°	39.0602'
99+25		13°	27.4405'
99+00	4	12°	15.8208'

103+00	4	2° 54.4556'
102+75	4	1° 51.3160'
102+50	4	0° 44.1914'
15.70		↑ 0° 00' off Tan to curve
102+34.30 P.C.S	✓	28° 13' 34" ✓ 28° 13. 5794 ✓
102+25		27° 46.8769'
102+00	#	26° 35.2572
101+75		25° 23.6375
101+50	#	24° 12.0718
101+25		23° 00.3981

105+33$^{\underline{80}}$ P.T. end spiral 8$^{\underline{80}}$	4	9°	32.0284' ✓ 9°32' = $\frac{2\Delta s}{3}$
105+25	4	9°	23.3760'
105+00	4	8°	56.1024'
104+75	4	8°	24.8428'
104+50	4	7°	49.5982'
104+25	4	7°	10.3686'
104+00	4	6°	27.1540'
103+75	4	5°	39.9544'
103+50	+	4°	48.7798'
103+25	4	3°	53.6102'

107+50	4	0° 06.9879'
107+25	4	0° 01.9753
107+00 3$^{\underline{26}}$	4	0° 00.0297'
106+96$^{\underline{74}}$ P.T. begin spiral		0° 00'
106+75		
106+50		
106+25		
106+00		
105+75		
105+50		

		0°	↗ 00'
			$\frac{\Delta}{3} = 3°42'$ ✓
109+97.41 P.C.S.	#	3°	41.7562' ✓
109+75	#	3°	09.8807'
109+50	#	2°	37.3081'
109+25	#	2°	07.7955'
109+00	#	1°	41.3529'
108+75	#	1°	17.9703'
108+50	#	0°	57.6477'
108+25	#	0°	40.3851'
108+00	#	0°	26.1931'
107+75	#	0°	15.0605'

112+25			8° 24.1219'
112+00		✓	7° 28.7458'
111+75			6° 33.3697'
111+50		✓	5° 37.9936 P.O.C
111+25			4° 42.6175'
111+00		✓	3° 47.2414'
110+75	POC. Cbs		2° 51.8653'
110+50		✓	1° 56.4892'
110+25			1° 01.1131'
110+00			0° 05.7370'

$\Delta = 60°52'44''$
R = 776
L = 824.53
T = 455.99
$d_1 = 2.215043'$
$d_{25}' = 55.3761$
$d_{50}' = 1°50.7522$

114+75		17°	37.8829'
114+50	✓	16°	42.5068'
114+25		15°	47.1307'
114+00	✓	14°	51.7546'
113+75		13°	56.3785'
113+50	✓	13°	01.0024'.
113+25		12°	05.6263'
113+00	✓	11°	10.2502'
112+75		10°	14.8741'.
112+50	✓	9°	19.4980'

117+25	✓	26° 51.6439'
117+00	✓	25° 56.2678'
116+75		25° 00.8917
116+50	✓	24° 05.5156' P.O.C.
116+25		23° 10.1395'
116+00	✓	22° 14.7634'
115+75		21° 19.3873
115+50	✓	20° 24.0112'
115+25		19° 28.6351'
115+00	✓	18° 33.2590'

118+21^{94} E.C.		30°	26.3702' ✓
118+00	✓	29°	37.7722'
117+75		28°	42.3961'
117+50	✓	27°	47.0200'

StorM DraiN Wabaska on Nimitz Dr.
staked 8° Nly of ℄

24+00		49^{31}	52^{91} C 3^{60}
24+50 ℄ Lug$^{(2)}$	Sly Lt. Nly Rt	51^{50} 52^{00} ie 50^{36}	C 2^{38} C 1^{88} 53^{88} C-3^{52}
25+00 ℄ Lug Nly	52^{50} C 2^{23}	51^{41}	54^{73} C-3^{32}
25+50		52^{45}	55^{78} C-3^{33}
26+00		53^{50}	56^{90} C-3^{40}
26+50		54^{54}	58^{20} C-3^{66}
27+00		55^{59}	59^{27} C-3^{68}
27+50		56^{63}	60^{18} C-3 ^{55}
28+00		57^{68}	61^{71} C-4^{03}
28+55^{50} meet existing build cleanout Box. type B		ie 58^{80} top 68^{20}	61^{91} F 6^{39}

20+50		42^{16} 45^{53} C-3^{37}
21+00 Brk.		43^{00} 46^{90} C-3^{90}
21+50		44^{04} 47^{62} C 3^{58}
21+89 ℄ Lug Nly	46^{00}	49^{01} C-3^{01}
22+00		45^{09} 49^{34} C-4^{25}
22+50		46^{13} 50^{23} C 4^{10}
22+79 ℄ Lug Sly	48^{00}	50^{63} C-2^{63}
23+00		47^{18} 51^{07} C 3^{89}
23+50		48^{22} 51^{82} C-3^{60}

BM = N E BP Wabaska & Capistrano 69^{38}

staked 8° Nly of ℄

		37^{00}	C-1^{89}	
16+50	℄ Lug Sly ↗	34^{75}	38^{89}	C-4^{14}
17+00		35^{63}	39^{83}	C-4^{20}
17+50		36^{50}	40^{53}	C-4^{03}
18+00		37^{38}	41^{45}	C-4^{07}
18+50		38^{25}	42^{75}	C-4^{50}
19+00		39^{13}	43^{86}	C-4^{73}
	42" RCP ↗	40^{00}	C-4^{20}	
19+50	36" RCP ↙ ℄ Lug Sly	41^{00}	44^{20}	C-3^{20}
		40^{50}	C-3^{70}	
20+00		41^{33}	44^{83}	C-3^{50}

12+00		26^{88}	31^{81}	C-4^{93}
	℄ Lug Sly 29^{00}			
12+50	C-3^{80}	27^{75}	32^{80}	C5^{05}
13+00		28^{63}	33^{96}	C5^{33}
13+50		29^{50}	34^{18}	C-4^{68}
14+00		30^{38}	34^{93}	C4^{55}
14+50		31^{25}	39^{01}	C-7^{76}
15+00		32^{13}	40^{15}	C-8^{02}
15+50	48" R.C.P. ↗	33^{00}	C8^{53}	
15+50	℄ Lug Sly 34^{00} C7^{53}		41^{53}	
15+50	42" R.C.P.	33^{00}	C-8^{53}	
16+00		33^{88}	37^{85}	C-3^{97}

0+00 Evergeen & Wabaska inlet Nly to meet existing		$22^{35'}$	
0+30	22^{09}	26^{76} $C-4^{67}$	
0+60	21^{81}	26^{96} $C5^{15}$	
0+90	21^{53}	26^{92} $C-5^{39}$	
1+20	21^{25}	27^{44} $C6^{19}$	
1+50	20^{97}	28^{37} $C-7^{40}$	
1+80	20^{69}	28^{66} $C-7^{97}$	
2+00± ℄ Lug	20^{50}	28^{68} $C-8^{18}$	
11+22 end	25^{20}	30^{65} $C-5^{45}$	33^{19} $C-7^{99}$
11+50	26^{00}	32^{00} $C-6^{00}$	
11+75	26^{44}	32^{07} $C-5^{63}$	

Stake 18" RCP @ Evergreen - Lowell
& Wabaska

staked 5^{00} Sly ℄ inlet PK

	@ Wly meet		29^{96} meet		
	top cb @ BC Ely of inlet		29^{50}	$C0^{07}$	
	top cb ℄ inlet		29^{73}	29^{57}	$F0^{\cancel{17}}$ 16
	gutter		28^{67}	$C0^{90}$	
0+00	ie Lowell		25^{00}	$C-4^{57}$	
0+30			24^{12}	29^{55} $C5^{43}$	
12° N & S on line of ℄ box cbs	Sly cb	$C0^{21}$ 27^{91}	27^{70}	Nly 27^{74} 28^{47}	$C0^{73}$
	top cb inlet ℄		27^{72}		
	top cb Ely island	Sly cb 27^{60}	27^{91} $C0^{31}$	Nly cb 27^{64}	28^{40} $C0^{76}$
	gutter	$C1^{02}$	26^{89}		$C1^{58}$
	ie	$C4^{41}$	23^{50}		$C4^{97}$
0+60			23^{24}	28^{23} $C4^{99}$	

12° N & S of ℄ box on cb line

$0+87^{7}$	Ely cb line Wabaska	to Sly	26^{82}	27^{00} $C0^{18}$	
		to Nly	26^{87}		27^{08} $C0^{21}$
	gutter		26^{02}	$C0^{98}$	$C-1^{06}$
		ie	22^{35}	$C4^{65}$	$C-4^{73}$

Sta $15+5^{0}$ 18" Storm Drain from Sly

Sly 56^{40} C·3^{40}

0+92 Headwall 53^{00} Nly 57^{24} C 4^{24}

0+72 36^{00} 47^{08} C-11^{08}

0+36 35^{00} 43^{42} C-8^{42}

0+00 meet existing 42"x48" 34^{00} 36^{91} C 2^{91}

$19+5^{0}$

0+25^{00} inside Nly edge ℄ K-C 41^{50} Ely 45^{88} C 4^{38} Wly 46^{74} C 5^{24}

0+00 meet existing 36"-42" 41^{00}

10° wly

42^{14} stake

$C\cdot 3^{14}$ ie
$F\,2^{58}$ ℄ cb
$F\,2^{62}$ wly box cb
grate = $F\,1^{75}_{35}$

10° Ely

42^{47} stak

$C\cdot 3^{47}$ ie
$F\,2^{25}$ ℄ cb
$F\,2^{21}$ Ely box cb
$F\,1^{42}$ grate

16+50 type k inlet (4)°
staked 10° E & W of ℄ box
on cb face extended

ie = 39^{00}
cb = 44^{72} ℄
Sut 43^{89}

+0.04 cb

wly

39^{75} CO^{75}
~~$F\,4^{97}$ ℄~~
~~$F\,5^{01}$ wly~~
~~$F\,4^{14}$ grate~~

-0.04 cs

Ely

39^{15} CO^{15}
$F\,4^{37}_{33}$ ℄ $F\,4^{33}$ Ely
$F\,3^{54}$ grate

7 3

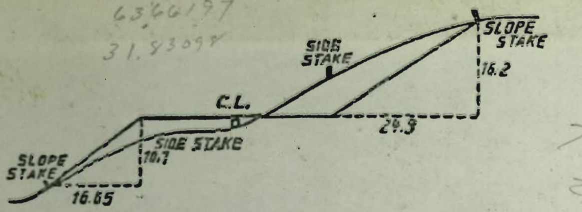
~~27 13~~ 5194

17 38 1094

10° 35' .41

6346197

31.83098



7674

2152

DISTANCES FROM SIDE STAKES FOR CROSS-SECTIONING.

SLOPE 1½ TO 1. ROADWAY OF ANY WIDTH.

	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	
0	0.00	0.15	0.30	0.45	0.60	0.75	0.90	1.05	1.20	1.35	0
1	1.50	1.65	1.80	1.95	2.10	2.25	2.40	2.55	2.70	2.85	1
2	3.00	3.15	3.30	3.45	3.60	3.75	3.90	4.05	4.20	4.35	2
3	4.50	4.65	4.80	4.95	5.10	5.25	5.40	5.55	5.70	5.85	3
4	6.00	6.15	6.30	6.45	6.60	6.75	6.90	7.05	7.20	7.35	4
5	7.50	7.65	7.80	7.95	8.10	8.25	8.40	8.55	8.70	8.85	5
6	9.00	9.15	9.30	9.45	9.60	9.75	9.90	10.05	10.20	10.35	6
7	10.50	10.65	10.80	10.95	11.10	11.25	11.40	11.55	11.70	11.85	7
8	12.00	12.15	12.30	12.45	12.60	12.75	12.90	13.05	13.20	13.35	8
9	13.50	13.65	13.80	13.95	14.10	14.25	14.40	14.55	14.70	14.85	9
10	15.00	15.15	15.30	15.45	15.60	15.75	15.90	16.05	16.20	16.35	10
11	16.50	16.65	16.80	16.95	17.10	17.25	17.40	17.55	17.70	17.85	11
12	18.00	18.15	18.30	18.45	18.60	18.75	18.90	19.05	19.20	19.35	12
13	19.50	19.65	19.80	19.95	20.10	20.25	20.40	20.55	20.70	20.85	13
14	21.00	21.15	21.30	21.45	21.60	21.75	21.90	22.05	22.20	22.35	14
15	22.50	22.65	22.80	22.95	23.10	23.25	23.40	23.55	23.70	23.85	15
16	24.00	24.15	24.30	24.45	24.60	24.75	24.90	25.05	25.20	25.35	16
17	25.50	25.65	25.80	25.95	26.10	26.25	26.40	26.55	26.70	26.85	17
18	27.00	27.15	27.30	27.45	27.60	27.75	27.90	28.05	28.20	28.35	18
19	28.50	28.65	28.80	28.95	29.10	29.25	29.40	29.55	29.70	29.85	19
20	30.00	30.15	30.30	30.45	30.60	30.75	30.90	31.05	31.20	31.35	20
21	31.50	31.65	31.80	31.95	32.10	32.25	32.40	32.55	32.70	32.85	21
22	33.00	33.15	33.30	33.45	33.60	33.75	33.90	34.05	34.20	34.35	22
23	34.50	34.65	34.80	34.95	35.10	35.25	35.40	35.55	35.70	35.85	23
24	36.00	36.15	36.30	36.45	36.60	36.75	36.90	37.05	37.20	37.35	24
25	37.50	37.65	37.80	37.95	38.10	38.25	38.40	38.55	38.70	38.85	25
26	39.00	39.15	39.30	39.45	39.60	39.75	39.90	40.05	40.20	40.35	26
27	40.50	40.65	40.80	40.95	41.10	41.25	41.40	41.55	41.70	41.85	27
28	42.00	42.15	42.30	42.45	42.60	42.75	42.90	43.05	43.20	43.35	28
29	43.50	43.65	43.80	43.95	44.10	44.25	44.40	44.55	44.70	44.85	29
30	45.00	45.15	45.30	45.45	45.60	45.75	45.90	46.05	46.20	46.35	30
31	46.50	46.65	46.80	46.95	47.10	47.25	47.40	47.55	47.70	47.85	31
32	48.00	48.15	48.30	48.45	48.60	48.75	48.90	49.05	49.20	49.35	32
33	49.50	49.65	49.80	49.95	50.10	50.25	50.40	50.55	50.70	50.85	33
34	51.00	51.15	51.30	51.45	51.60	51.75	51.90	52.05	52.20	52.35	34
35	52.50	52.65	52.80	52.95	53.10	53.25	53.40	53.55	53.70	53.85	35
36	54.00	54.15	54.30	54.45	54.60	54.75	54.90	55.05	55.20	55.35	36
37	55.50	55.65	55.80	55.95	56.10	56.25	56.40	56.55	56.70	56.85	37
38	57.00	57.15	57.30	57.45	57.60	57.75	57.90	58.05	58.20	58.35	38
39	58.50	58.65	58.80	58.95	59.10	59.25	59.40	59.55	59.70	59.85	39
40	60.00	60.15	60.30	60.45	60.60	60.75	60.90	61.05	61.20	61.35	40
41	61.50	61.65	61.80	61.95	62.10	62.25	62.40	62.55	62.70	62.85	41
42	63.00	63.15	63.30	63.45	63.60	63.75	63.90	64.05	64.20	64.35	42
43	64.50	64.65	64.80	64.95	65.10	65.25	65.40	65.55	65.70	65.85	43
44	66.00	66.15	66.30	66.45	66.60	66.75	66.90	67.05	67.20	67.35	44
45	67.50	67.65	67.80	67.95	68.10	68.25	68.40	68.55	68.70	68.85	45
46	69.00	69.15	69.30	69.45	69.60	69.75	69.90	70.05	70.20	70.35	46
47	70.50	70.65	70.80	70.95	71.10	71.20	71.40	71.55	71.70	71.85	47
48	72.00	72.15	72.30	72.45	72.60	72.75	72.90	73.05	73.20	73.35	48
49	73.50	73.65	73.80	73.95	74.10	74.25	74.40	74.55	74.70	74.85	49
50	75.00	75.15	75.30	75.45	75.60	75.75	75.90	76.05	76.20	76.35	50

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